

CLAIMS

1. – 19. (Canceled)

20. (Currently Amended) An apparatus capable of three dimensional (3D) imaging from one vantage point independent of profilometry comprising:

a housing having a physical terminus;

an image sensing array (ISA); and

an optical element in optical communication with the ISA,

wherein all light received by the apparatus for 3D imaging and any light emitted by the apparatus for 3D imaging passes through a physical terminus of the ~~instrument~~apparatus at which point a maximum separation between any two light rays used for 3D imaging does not exceed 2 inches.

21. (Original) The apparatus of claim 20 wherein a capture end further comprises:
an illumination source.

22. (Original) The apparatus of claim 20 wherein the optical element is one of a lens, a reflector, and a light guide.

23. (Original) The apparatus of claim 20 wherein three dimensional imaging is independent of time of flight of light reflected from the location to the image sensing array (ISA).

24. (Original) The apparatus of claim 20 wherein the three dimensional imaging is performed without requiring motion of the physical terminus of the apparatus.

25. (Original) The apparatus of claim 24 wherein the three dimensional imaging method is stereoscopy.

26. (Original) The apparatus of claim 20 further comprising a wireless data link.

27. (Original) The apparatus of claim 21 wherein the illumination source can vary an incident angle of light impinging on a target surface.

28. (Original) The apparatus of claim 24 wherein the three dimensional imaging method performs captures of data from at least two points of view to a target.

29. (Original) The apparatus of claim 28 wherein at least two captures are performed sequentially by a same ISA.

30. (Original) The apparatus of claim 20 further comprising a controller to automatically vary an optical path of the light rays used to capture a three dimensional image.

31. (Original) The apparatus of claim 20 further comprising a display to visualize the data collected.

32. (Original) The apparatus of claim 31 wherein visualized data guides a user in the capture of a target surface.

33. (Original) The apparatus of claim 20 wherein the 3D image can be made of a target surface that appears substantially homogeneous unless captured at finer than 300 pixels per inch resolution as measured at the target surface.

34. (Original) The apparatus of claim 20 wherein the 3D image can be made of a target surface that appears substantially homogeneous to an unaided human eye.

35. – 60. (Canceled)